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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09-829,774	04/10/2001	Gregory V. Andrews	2222-9	1558

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EXAMINER

PIERCE, JEREMY R

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 05/21/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,774

Applicant(s)

ANDREWS, GREGORY V.

Examiner

Jeremy R. Pierce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,7,9,11,12 and 14-38 is/are pending in the application.
- 4a) Of the above claim(s) 18-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,7,9,11,12,14-17 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendment B has been filed on April 22, 2003 as Paper No. 6. Claims 2, 3, 5, 8, 10, and 13 have been cancelled. Claims 1, 4, 6, 7, 9, 11, 12, and 14-16 have been amended. New claims 35-38 have been added. Claims 18-34 are withdrawn. Claims 1, 4, 6, 7, 9, 11, 12, 14-17, and 35-38 are currently pending. The amendment is sufficient to withdraw the 35 USC 102 and 103 rejections set forth in the last Office Action.

Claim Objections

2. Claims 1 and 9 are objected to because of the following informalities: Both claims 1 and 9 recite the fluid-soluble strand is selected from the group consisting of co-nylon and polactic acid. However, "polactic" acid is not supported by the specification, nor is it known what exactly it is. The Examiner will assume that the limitation should be "polylactic" acid, since that is what is listed in the specification in paragraph 52. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 6, 7, 9, 11, 15, 16, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton (U.S. Patent No. 5,062,161) in view of Ohmory et al. (U.S. Patent No. 5,455,114) or Kalde et al. (WO 95/33877).

Sutton discloses a protective yarn formed by a multifilament bundle of continuous metallic strands entwined with a transitory strand (column 2, lines 44-55). The transitory strand may be a water-soluble polyvinyl alcohol (column 3, lines 1-3), but Sutton does not disclose it to be co-nylon or polylactic acid. Ohmory et al. teach polylactic acid fibers are known water-soluble fibers that are similar to polyvinyl alcohol (column 1, lines 21-25). Kalde et al. teach that co-polyamide can be used as a dissolving fiber in the production of fabrics (Abstract). It would have been obvious to one having ordinary skill in the art to use co-nylon or polylactic acid as the water soluble fiber in the invention of Sutton, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. With regard to claims 6, 11, and 15, the metallic wire can be stainless steel (column 2, line 58). With regard to claims 7 and 16, Sutton does not disclose the size of a stainless steel wire in inches. However, the size of the stainless steel wires would be a result effective variable that would affect the overall size of the fibers and their flexibility in knitting. It would have been obvious to one having ordinary skill in the art to use 0.002-inch stainless steel wires in Sutton, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). With regard to claim

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9 and 17, the strands may be knitted into a garment (column 3, line 11). With regard to claim 37, the fabric may be coated with a flexible urethane (column 4, lines 16-17).

5. Claims 1, 4, 9, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dugan (U.S. Patent No. 5,555,716) in view of Ohmory et al. or Kalde et al.

Dugan discloses a core comprising one or more non-micro fibers and sheath fibers that comprise a soluble sea component (column 3, lines 20-29). The non-micro fiber may be an inorganic material such as metal (column 7, lines 59-60). Dugan discloses the water-soluble strand may be polyvinyl alcohol (column 6, lines 37-39), but does not teach it to be co-nylon or polylactic acid. Ohmory et al. teach polylactic acid fibers are known water-soluble fibers that are similar to polyvinyl alcohol (column 1, lines 21-25). Kalde et al. teach that co-polyamide can be used as a dissolving fiber in the production of fabrics (Abstract). It would have been obvious to one having ordinary skill in the art to use co-nylon or polylactic acid as the water soluble fiber in the invention of Dugan, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. With regard to claims 4 and 12, the core may contain one or more fibers (column 7, lines 46-47). With regard to claims 9 and 17, the yarns may be knitted into a fabric (column 9, line 38).

6. Claims 1, 6, 9, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guevel et al. (FR 2,668,176) in view of Ohmory et al. or Kalde et al.

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A Derwent abstract to the Guevel reference was provided in the last Office Action. A full English translation has been ordered.

Guevel et al. disclose multifilament stainless steel wires spirally wrapped by a solvent soluble synthetic fiber (Abstract). Guevel et al. teach one example of synthetic fiber to be polyvinyl alcohol, but do not teach co-nylon or polylactic acid. Ohmory et al. teach polylactic acid fibers are known water-soluble fibers that are similar to polyvinyl alcohol (column 1, lines 21-25). Kalde et al. teach that co-polyamide can be used as a dissolving fiber in the production of fabrics (Abstract). It would have been obvious to one having ordinary skill in the art to use co-nylon or polylactic acid as the water soluble fiber in the invention of Guevel et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. With regard to claim 9, although Guevel et al. do not state that the fibers are to be formed into a fabric in the abstract, it would be obvious to use the fibers for that purpose, since Guevel et al. disclose the wires possess great suppleness for a wide range of applications and fibers are typically produced to be made into fabrics. More will be known upon receiving the English translation.

7. Claims 14, 35, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton in view of Kalde et al. as set forth above in section 4, and further in view of Rosenstein et al. (U.S. Patent No. 3,769,787).

Sutton does not disclose wrapping two soluble filaments around the multi-filament core. Rosenstein et al. disclose wrapping a multi-filament core helically in both clockwise and counterclockwise directions can better prepare a fiber for knitting (column

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2, lines 29-46). It would have been obvious to one having ordinary skill in the art to wrap the metal fibers of Sutton in both clockwise and counterclockwise directions in order to make a more compact fiber that can be knitted more easily, as taught by Rosenstein et al. With regard to claims 36 and 38, Sutton does not teach the denier of the soluble yarn. However, the size of the soluble yarn would be a result effective variable that would affect the overall size of the fibers, their flexibility in knitting, and the ability to hold together the metal wires. It would have been obvious to one having ordinary skill in the art to use soluble yarn with a denier of 750 in Sutton, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

8. Claims 14, 35, 36, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guevel et al. view of Kalde et al. as set forth above in section 6, and further in view of Rosenstein et al.

Guevel et al. do not disclose wrapping two soluble filaments around the multi-filament core. Rosenstein et al. disclose wrapping a multi-filament core helically in both clockwise and counterclockwise directions can better prepare a fiber for knitting (column 2, lines 29-46). It would have been obvious to one having ordinary skill in the art to wrap the metal fibers of Guevel et al. in both clockwise and counterclockwise directions in order to make a more compact fiber that can be knitted more easily, as taught by Rosenstein et al. With regard to claims 36 and 38, Guevel et al. do not teach the denier of the soluble yarn. However, the size of the soluble yarn would be a result effective variable that would affect the overall size of the fibers, their flexibility in knitting, and the

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ability to hold together the metal wires. It would have been obvious to one having ordinary skill in the art to use soluble yarn with a denier of 750 in Guevel et al., since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Response to Arguments

9. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

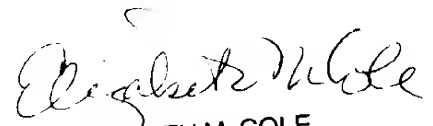
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce
Examiner
Art Unit 1771

May 17, 2003



ELIZABETH M. COLE
PRIMARY EXAMINER